

AUSTRALIAN COLEOPTERA: NOTES AND NEW SPECIES. No. iv.

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(Thirteen Text-figures.)

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The following notes are the outcome of an examination of some unnamed Buprestidae belonging to various Australian Museums and of Tenebrionidae and Cistelidae sent by entomological friends. Two new genera are described and some interesting new species from an interesting faunal region, Stanthorpe—a granitic highland of South Queensland—sent by Messrs. F. A. Perkins and R. Illidge.

Further corrigenda to my "Revision of Stigmodera."

S. (Castiarina) crenata Don. In my "Revision" I followed Castelnau and Gory's erroneous determination of this species, and again erred in my identification of these authors' *S. plagiata* with a species that I now consider to be undescribed. A further confusion of names has been caused by the fact that, in the monograph referred to, the species described in the text as *sexplagiata* is figured as *plagiata*.

The only *Castiarina* that corresponds with Donovan's figure (Epit. Ins. N. Holl., f. 3)—his description is useless—is *amphichroa* Boisd. Hence the following corrections are necessary in my tabulation:—

No. 342. Light bands of elytra red, apices widely lunate, external spine long *kershawi*, n.sp.

No. 343. Light bands of elytra orange—laterally sanguineous—apices finely lunate, shortly bispinose *sexplagiata* C. & G.

The synonymy (p. 87 of my Revision) should now read:

S. crenata Don. = *amphichroa* Boisd. = *sexpilota* C. & G. = *sieboldi* C. & G.

S. cylindracea Saund. = *bucolica* Kerr. (The latter, a distinct species, was erroneously placed as a synonym of *amphichroa* Boisd.).

S. sexplagiata C. & G. = *plagiata* C. & G. = *crenata* C. & G. (*nec* Don.) = *bicrucata* Hope = *hopei* Boh. = *similata* Boh. = *krefftii* Mael. = *variata* Kerr.

(This is probably the commonest species in the genus and generally labelled in collections *S. crenata* Don.).

S. erythromelas Boisd. In my tabulation, *S. cyanipes* Saund. and *S. erythromelas* Boisd. should be interchanged, so that *cyanipes* should appear as No. 304 and *erythromelas* as 305, with its synonyms *armata* Thoms. and *longula* Blkb. The following is the description of the new species referred to above.

STIGMODERA (CASTIARINA) KERSHAWI, n.sp.

Lightly obovate. Head greenish, mouth blue, pronotum and scutellum black or blue-black, underside and legs blue; elytra brick red with a narrow basal band, the suture, two fasciae and a quadrilateral apical spot blue-black, the premedial fascia lunate, not extending to the sides, the postmedial fascia wider than the former, widened at the suture and extending to the sides.

Head widely excavated between eyes, punctate. *Prothorax* lightly bisinuate at apex, strongly so at base, sides well rounded, widest behind middle, all angles a little produced, disc moderately convex, with round, well-defined punctures (considerably larger and less dense than in *sexplagiata* C. & G.), medial channel in general lightly indicated, frequently obsolete at middle. *Elytra* wider than prothorax, widest behind middle, sides lightly constricted behind humeral swelling, apex with a moderately large semicircular lunation, the external spine rather long, the sutural spine sub-obsolete, posterior margins minutely serrated: striate-punctate, the interstices lightly convex and closely punctate, the 2nd and 4th wider and more raised than the rest. Underside lightly punctate, very shortly and sparsely pubescent. *Dimensions*: 10.12 x 4.4.5 mm.

Habitat.—Victoria: Warburton (Mr. J. E. Dixon and the author); N.S. Wales: Mountain districts, Jenolan, etc.

Ten examples are now before me. This is the species (No. 342 of my tabulation) erroneously determined as *plagiata* C. & G. which should be known as *sexplagiata*. Though closely allied to this species, the following comparison shows very clear separating characters, especially in the form and sculpture of the pronotum, and the very different elytral apex.

Dedicated to Mr. J. Kershaw of the National Museum, Melbourne. Type in Coll. Carter.

<i>sexplagiata</i> C. & G.	<i>kershawi</i> , n.sp.
Colour	
<i>Pronotum</i> . green or greenish-black.	black or blue-black.
<i>Underside</i> . green-bronze.	peacock-blue.
<i>Elytra</i> . ground colour orange, sanguineous at sides, premedial fascia often broken up into spots.	uniformly brick-red, premedial fascia seldom (if ever) broken up into spots.
Structure	
<i>Eyes</i> . closer.	wider apart.
<i>Pronotum</i> . densely, finely and uniformly punctate, gibbous, with deep, well-defined medial sulcus.	punctures larger and not uniformly placed, not gibbous, medial sulcus seldom clearly defined.
<i>Elytra</i> . apical lunation small, formed by oblique excisions between ill-defined spines.	apical lunation much larger, forming a semicircular excision, the exterior spines well-defined.

BUPRESTIDAE.

Chalcotaenia quadri-impressa Waterh. = *C. finitima* Obenb.

An example of Obenberger's species labelled "compared with type," sent by Mons. Théry, is indistinguishable from the well known *C. 4-impressa* Waterh.

Endelus subcornutus Kerremans. I have identified a specimen of this in the Macleay Museum, labelled Cape York. It was described as from New Guinea, and is the first recorded species of the genus from Australia.

Castalia bimaculata L. = *Polycesta mastersi* Macl. I have little doubt as to the correctness of this synonymy which a comparison of Macleay's type with the figure of Linnaeus's species in Laporte and Gory's Monograph, as also in Saunders's Revision (1868), substantiates. Macleay's brief description of the elytra of *Polycesta mastersi* is misleading "Elytra coarsely striato-punctate," since the elytra have the alternate intervals carinate-costate, while the apices are multispinose. No reference is made to the lightly marked "maculae," seen in some of the specimens, though often evanescent in old examples.

CASTALIA SCINTILLANS, n.sp. (Text-fig. 1.)

Elongate, oblong, dull metallic reddish-brown above and below, including legs and antennae.

Head scarcely, or feebly convex, eyes rather prominent; coarsely rugose punctate, with elongate, raised, medial impression; antennae short, segments 5-11 very slightly and obtusely dentate. *Prothorax* convex, apex nearly straight (lightly advanced at anterior angles), base bisinuate; sides rounded, hind angles subrectangular; disc subconfluently alveolate-punctate, the edges of punctures raised, the base of each with a brilliant metallic spot; medial sulcus distinct, some reticulate rugosity at sides, extreme margins reflexed. *Scutellum* small, rounded. *Elytra* of same width as prothorax at base and more than thrice as long; subparallel, widening at shoulders, margins faintly crenulate behind, apices trispinose, the short teeth forming the terminals of the costae; alveolate-punctate, the punctures more or less seriate and with metallic scintillation as on pronotum; the alternate intervals forming slightly crenulate costae, the 2nd and 4th more strongly raised than the rest; suture also raised; pro-, meso- and metasternum coarsely punctate, abdomen with irregular elongate punctate impressions with smooth interspaces, the first segment sulcate. *Dimensions*: 14 x 5 mm.

Habitat.—Western Australia: Kellerberrin (W. Duboulay).

Two examples from the National Museum, Melbourne, though in outline and convexity like *Microcastalia globithorax* Thoms., cannot, I think, be generically separated from *Castalia bimaculata* L., from which it differs as follows:—colour a lighter shade of bronze, without any sign of the dark fasciae sometimes seen in *bimaculata*; in form, narrower, more elongate and depressed, the punctures of pronotum much denser, the elytral costae wider and less clearly defined, apices of elytra without the many small spines seen in *bimaculata*, while the scintillating base of punctures is a noticeable character that extends to the femora.

From *Microcastalia globithorax* Thoms. (= *Bubastodes sulcicollis* Blackb.) it differs in colour, in the much rougher sculpture, and the more pronounced elytral costae, *inter alia*. Type in the National Museum, Melbourne.

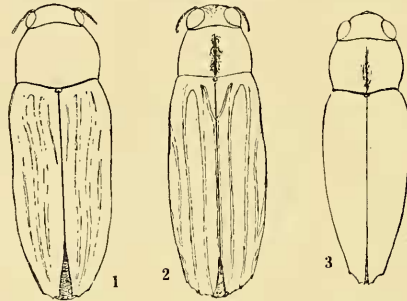
Two examples of *Castalia bimaculata* L. are before me, a male from Blackall (Q.) measuring 15 x 6 mm. and a female from the National Museum, from Rockhampton, measuring 21 x 7½ mm.

NEOBUPRESTIS ALBOPARSA, n.sp. (Text-fig. 2.)

Elongate-oblong, moderately flat; head and pronotum dull black with violet reflections, elytra dull blue-black, with a few small white pubescent spots arranged more or less in transverse lines, one on each interval near base, about 12 in a premedial line, about 8 in each of two equally-spaced postmedial lines and about 8 close to apex, besides one or two of irregular position; underside glabrous,

brilliantly metallic, dark green or blue, with the apical segment and margins of other segments of abdomen violet; antennae, legs and tarsi blue.

Head flat, rugose-punctate, with short sparse pubescence, feebly sulcate between the eyes, with a smooth medial carina in front; eyes large and prominent. *Prothorax* slightly narrower than head; apex and base subtruncate, sides very lightly arched and feebly converging to apex; deeply and widely sulcate in middle, anterior angles acute, posterior rectangular, disc rugose-punctate with some large irregular depressions. *Scutellum* small, circular, impressed in middle. *Elytra* much wider than prothorax and three and one-third times as long; each with



1. *Castalia scintillans*. 2. *Neobuprestis albosparsa*.
3. *Notobubastes costatus*.

six well-marked costae (including the raised suture and marginal borders), besides a short scutellary costa, the interspaces reticulate-punctate; the apices multi-spinose, the spines small. Sternal area with large round punctures, abdomen with longitudinal pear-shaped punctures, the first segment sulcate, the apical segment bispinose, a pubescent spot at side of each segment. Hind tarsi with basal joint as long as 2nd and 3rd combined. *Dimensions*: 13 x 5½ mm.

Habitat.—Cairns, N. Queensland (Allen).

A single male specimen in Mr. Lea's collection is very like *N. marmorata* Blackburn (of which a female from Victoria is before me) in form, but differs markedly in (1) colour, the large yellow fasciate blotches of Blackburn's species being replaced by very small pubescent spots, (2) the intercostal spaces of elytra more coarsely punctate, (3) underside more brilliant. Type in Coll. Lea. There are also two examples in the Macleay Museum, one labelled Richmond (presumably Richmond River, N.S.W.), the other labelled Victoria, in which the pubescent spots are much abraded.

N.B.—Probably *N. marmorata* Blkb. and *N. albosparsa* should be generically separated from *N. frenchi* Blkb. and *N. australis* Blkb., the less prominent eyes, the more sinuate apex of pronotum, the less elongate elytra with non-spinose apices, the first abdominal segment not sulcate in the case of the two last suggesting differentiation, but with the scanty material available they may for the present remain as in the "Genera Insectorum."

PSEUDANILARA BICOLOR, n.sp.

Depressed, subparallel; head, antennae and prothorax indigo-blue, the last with front margins violet; elytra coppery-brown, subnitid, underside and legs violet.

Head densely and finely punctate, clothed with long whitish hair; eyes large, prominent, converging behind; antennae with segment 1 as long as 2-3 combined, 3 longer than 2, subdentate; 4-11 triangular with short internal tooth. *Prothorax* convex and transverse, bisinuate at apex and base, the former lightly produced in middle and at angles, the latter widely lobate in middle and sub-falcate at posterior angles; sides well rounded, widest near base, considerably narrower at apex (here slightly narrower than head) than at base; all angles acute; disc densely and strongly punctured, setose at sides and apex, without foveae or medial line. *Scutellum* circular, moderately large. *Elytra* rather wider than prothorax at base, shoulders rounded; subparallel for the greater part, separately rounded at apex, apices not quite covering abdomen, leaving an exposed coarsely punctate pygidium; hind margins denticulate; disc densely and finely punctate with some feebly indicated longitudinal impressions; underside rather densely punctate with a short white pubescence. *Dimensions*: 7 x 2.5 mm.

Habitat.—Queensland, Bowen (A. Simson).

A single specimen from the South Australian Museum is a puzzling species to classify. The wide head and strongly bisinuate base of pronotum give it a strong likeness to *Melanophila cupripes* Macl., but the first two abdominal segments are soldered and the elytra do not quite cover the abdomen. *P. roberti* Théry has the abdomen completely covered by the elytra, but I am doing less violence to generic limits by placing it here than in *Anilara*, *Melanophila* or *Neocuris*, the bisinuate base of pronotum placing it outside the first and the soldered basal segments of abdomen outside the two latter. Type in S. Australian Museum.

Pseudanilara roberti Théry.—I have determined 4 examples of this taken near Sydney (two by myself and two by Mr. Erasmus Wilson). The type was described from Victoria. A specimen in the Macleay Museum is labelled Port Denison, Q'land. (Since writing the above I have received the type, very courteously sent for examination by the author. This confirms my determination. Further a comparison of this type with that of *Anthaxia purpureicollis* Macl. fails to show any specific distinction, while *Anthaxia nigra* Macl. differs only in its black surface and slightly smaller size. Thus *Pseudanilara* (*Anthaxia*) *purpureicollis* Macl. = *P. roberti* Théry, var. *nigra* Macl.

PSEUDANILARA OCCIDENTALIS, n.sp.

Oblong, abruptly attenuated behind; head and pronotum blue, suffused with purple, the latter colour especially at sides and base of prothorax; elytra bluish-green, legs and underside purple, abdomen here and there greenish.

Head wider than apex of prothorax, eyes subparallel, the inner margins slightly converging to the vertex, surface punctate and pubescent. *Prothorax*: apex feebly advanced in middle and at sides, base strongly bisinuate, sides obliquely diverging from apex to near base, then abruptly and roundly narrowed, hind angles acute and subfalcate; disc finely and densely alveolate-punctate, more strongly at sides and base. *Scutellum* minute and circular. *Elytra* clearly narrower than base of prothorax, subparallel to near apex, apices separately rounded, margins finely serrate for the greater part; a wide ridge following the basal outline, accentuated by sulcate depression behind it, disc closely shagreened, the sculpture (under a Zeiss binocular) shown to consist chiefly of fine transverse ridges. The suture between the 1st and 2nd abdominal segments almost

invisible; basal margin of metasternum with four short spines, two on each side at the angles; prosternum with fine, dense punctures, abdomen subglabrous and nitid, with uneven shallow punctures. *Dimensions*: 7 x 3 mm.

Habitat.—Western Australia (South Australian Museum).

A single example can be readily distinguished, apart from colour, by the subfalcate basal angles of the pronotum, the elytral basal ridge, and the spinose metasternum. Type in South Australian Museum.

Neotorresita.—This genus has recently been published by Dr. Obenberger (Sbornik Ent. Mus. Prague, 1923, p. 19) for the reception of a species that is clearly identical with that much described species *Melanophila* (*Anthaxia*) *cupripes* Mael., referred to by me (Ent. Soc. Lond., 1923, p. 104). Since then I have been able to study the palaeartic genus *Melanophila* and am now satisfied that the above species is a *Pseudanilara*. Dr. Obenberger also gives six characters in which his genus differs from *Melanophila*. The following synonymy thus shows an insect that has been referred to six different genera: *Pseudanilara* (*Anthaxia*) *cupripes* Mael. = *Melanophila* (*Melobasis*) *laticeps* Kerr. = *M. australasiae* Kerr. = *Neocuris dilaticollis* Blkb. = *Neotorresita acharidi* Obenb.

NOTOBUBASTES COSTATUS, n.sp. (Text-fig. 3.)

Elongate ovate, convex; dark violet-bronze, subnitid; head and underside with short pubescence.

Head convex in front, a longitudinal carina between eyes, surface coarsely rugose-punctate; eyes prominent, making head slightly wider than base of prothorax, their inner margins not quite parallel. *Prothorax* convex, apex truncate, base bisinuate, anterior angles obtuse, sides evenly rounded, scarcely sinuate before the acute posterior angles, the lateral carina ill-defined, not visible from above; medial sulcus deep, not quite reaching apex; surface coarsely and rather unevenly punctate, the lateral half coarsely rugose. *Scutellum* small, transversely oval, depressed in middle. *Elytra* wider than prothorax at base, shoulders widely rounded, sides attenuate from middle; apices deliscent, each shortly but sharply trispinose, the sutural and subsutural spines rather close, enclosing a lunate excision, the lateral spine separated from the second by a sinuate margin, margins entire, each elytron with four well-defined costae, these roundly convex; becoming narrowly carinate at apex; besides a short scutellary costa and the raised suture, the costae sparsely, the intervals strongly punctate; the punctures in the basal area forming crenulations on the sides of the widened costae. Sternal regions, especially the prosternum, densely rugose-punctate, abdomen coarse and (except the anal segment) sparsely punctate, the latter rather squarely rounded behind and densely punctate. *Dimensions*: 12 x 4 mm.

Habitat.—Western Australia: Kookynie (French Coll. in National Museum, Melbourne).

A single female specimen is the only example I have seen of this distinct species. While generically inseparable from my other three species, it is clearly differentiated by outline and elytral sculpture. Type in Melbourne Museum.

Bubastes.—Dr. Jan Obenberger has published recently a Revision of the genus (Ann. Soc. Ent. Fr., 1920, pp. 89-108) and has very courteously supplied me with a copy. Having lately examined a very large number of specimens from the chief museums of Australia with this "Revision" before me, the resulting notes here recorded may interest students of Australian Buprestidae.

Obenberger proposes the name *Bubastini* to include in a group the genera *Bubastes* C. & G., *Euryspilus* Lec., *Neraldus* Théry, *Neurybia* Théry and *Para-*

tassa Mars. (the last found in Africa and unknown to me). I cannot recognize *Neraldus* as distinct from *Bubastes*. A cotype of *N. bostrychoides* Théry, kindly sent me by the author, only differs from typical *Bubastes* in the less prominent eyes. Obenberger tabulates *Neraldus* "d'après leur description" as follows:—"Yeux plus petits, non saillants, réniformes, éloignés du prothorax. La carène latérale du prothorax manque presque complètement. La marge antérieure du prothorax est échancrée."

Of these four characters the first two are true only in degree. Other *Bubastes*, e.g., *achardi* Obenb. and *cylindrica* Macl., approach it as to the small and less salient eyes. The character "éloignés du prothorax" depends somewhat on the position of the head when set. As regards the lateral carina, my example has a defined carina for about halfway from the base, a character shared by *B. globicollis* Thoms., while I cannot find a trace of the fourth character (prothorax échancré). Moreover, I think Obenberger has redescribed *N. bostrychoides* as *Bubastes olivinus*.

In his characterization of the group *Bubastini* there is one notable mistake, the last sentence being "Le sommet des élytres n'est jamais denté en scie latéralement." As a matter of fact every *Bubastes* examined has the hind margins serrated more or less finely. *Euryspilus* and *Neurybia* have minute crenulations.

On the same page he says "Le genre *Bubastes* . . . est jusqu'à présent assez mal représenté dans les collections et ses espèces semblent être relativement rares." This is not the case in Australian collections. In Western Australia some species are very common. I have before me now about 150 examples of the genus, including 35 *laticollis* Blackb., 30 *inconsistans* Thoms., 24 *bostrychoides* etc.

Of the specific characters used by Obenberger, I am unable to follow him in his division into two groups, the one distinguished by "le front bombé," the other by "le front creusé au milieu par une large impression." Belonging to the first group he states that *cylindrica*, *olivinus*, *inconsistans* and *sphenoidea* "ont la tête bombée, absolument sans impression marquée." I have before me *cylindrica* (compared with type), *inconsistans* Thoms. (= *inconstans* Blackb., compared with type), *sphenoidea*, also the types of *occidentalis* and *splendens* of Blackburn, and cotypes of *laticollis*. In no single case can the head be said to be "without an impression," though it is often confined to a small sulcus at the base of the head, and while some species (e.g., *bostrychoides* and *sphenoidea*) have the front more clearly "bombée" than others, it is only a question of degree, and amongst a series of *bostrychoides* and *inconsistans* I find examples in which the front might be termed "creusée," the difference being in some cases sexual. The genus is difficult to classify owing to the great variability of the common species in size and colour.

As to colour, see Blackburn's description of *B. inconstans* (later considered by him as a synonym of *inconsistans* Thoms.). Blackburn omitted both dimensions and locality for *inconstans* and *laticollis*. I have both species varying from 11 x 3½ mm. to 22 x 8 mm., the larger examples being female. The former I have from N.W. Victoria and South Australia, the latter from Kalgoorlie, Geraldton and other parts of Western Australia. *Bubastodes sulcicollis* Blackb. and *Neobubastes aureocincta* Blackb. should be clearly separated from *Bubastes*, the former being synonymous with *Microcastalia globithorax* Thoms., as suggested by Kerremans (Gen. Ins.), the latter being erroneously merged with *Bubastes* by Kerremans.

The following is my view of the described species of *Bubastes*, with synonymy and localities:—

1. *sphenoidea* C. & G. Cunnamulla, Queensland.
2. *inconsistans* Thoms. = *inconstans* Blackb. = ? *australasiae* Obenb. N.W. Victoria and Quorn, S.A.
3. *globoicollis* Thoms. = ? *simillima* Obenb. Nyngan, N.S.W., and Queensland.
4. *cylindrica* Macl. Geraldton, and King Sound, W.A.
5. *laticollis* Blackb. Kalgoorlie, Geraldton, Mullewa, W.A.
6. *vagans* Blackb. N.W. Victoria and S.A.
7. *splendens* Blackb. = *persplendens* Obenb. Tennents' Creek, Fitzroy River.
8. *occidentalis* Blackb. Eucla, S.A. and W.A.
9. *suturalis* Cart. = *strandii* Obenb. Drysdale River, and Cue, N.W.A.
10. *formosa* Cart. Cue, W.A.
11. *bostrychooides* (Neraidus) Théry = *olivinus* Obenb. Perth, Beverley, W.A.
12. *achardi* Obenb. Cobar, N.S.W., Cooktown, Q'land.
13. *niveiventris* Obenb. Cooktown, Rockhampton, Q'land.
14. *obscura* Obenb. Kuranda, Q'land.
15. *aenea* Obenb. N. Q'land.
16. *viridicuprea* Obenb. N. Q'land.
17. *leai*, n.sp. W.A.

There is little doubt of the synonymy of *splendens* and *persplendens*. There is some blunder in Blackburn's dimensions, given as 7 x 2 lines. The type from the National Museum, before me, measures 18½ x 5½ mm., which is almost exactly that of *persplendens* from the same district, while Obenberger's description of the latter accurately fits Blackburn's type, except that the elytra are greenish-blue instead of emerald-green, as the head and pronotum.

Since writing the above I have received a copy of Dr. Obenberger's paper (Arch. fur Naturg., 1922, pp. 64-168) in which he describes six new species of *Bubastes*, besides a so-called subspecies (which I take to be synonymous with *variety*). As elsewhere it seems that this author does not make sufficient allowance for variation. Thus *B. simillima* Obenb. does not, I think, warrant separation from *globoicollis* Thoms., in which the eyes—according to 8 examples before me—are in no case so prominent laterally as in the outline figure given on p. 106 of Obenberger's Revision. Again *B. australasiae* Obenb. is only, I consider, a form of *inconsistans* Thoms. Of the remaining four I think I have identified *P. niveiventris* in specimens in the Macleay Museum from Cooktown and Rockhampton, and *P. obscura* in an example from Kuranda sent by Monsieur Théry for determination. *P. aenea* and *P. viridicuprea* I cannot identify at present. Both must be rather close to *occidentalis* Blackb. The evident synonymy of *B. strandii* Obenb. with *B. suturalis* Cart. and of *B. persplendens* Obenb. with *splendens* Blackb. is unnoticed.

BUBASTES LEAI, n.sp.

Elongate, subcylindric, finely attenuate behind; head and pronotum green (in one example bluish-green), moderately nitid, elytra golden-green or coppery, underside brilliantly coppery-green, apical segment violaceous; legs coppery, antennae coppery at base, the rest obscure greenish.

Head (seen from above) convex in two examples, feebly concave in a third, clearly channelled near base of forehead, eyes not prominent (less so in ♂ than in ♀, their inner margins subparallel, interspace about the width of the lateral

diameter of one eye; densely covered with round deep punctures. *Prothorax*: apex and base bisinuate, the former rather strongly produced in middle, widest near front, sides gently widening from base to apical third, then rounded and narrowed to apex, posterior angles acute; punctures as on head, scarcely contiguous in middle, alveolate at sides. *Scutellum* subcircular, laevigate. *Elytra* subconic, apices obliquely bispinose; with densely crowded rows of punctures, the intervals nearly flat and themselves closely punctate except near base. Prosternum coarsely punctate, mesosternum transversely rugose, metasternum and abdomen closely and finely punctate; underside without pubescence. *Dimensions*: 13.5-15 x 4.3-4.6 mm.

Habitat.—Western Australia (South Australian and Macleay Museums).

Three examples examined differ slightly in the colour of the upper surface. What I believe to be the male has the eyes less prominent, the elytral intervals feebly convex with the usual abdominal sexual character (the last segment shorter than elytra and truncate at apex). Only three described species have a bright metallic green or coppery underside, viz., *splendens* Blkb., *occidentalis* Blkb., and *suturalis* Cart. *B. leai* is readily distinguished from these by the much more densely punctate head and pronotum and its duller upper surface. In its surface sculpture and general form it is nearest *B. bostrychoides* Théry (= *B. olivinus* Obenb.). It is not very near the other bicoloured species *B. vagans* Blkb., which has its pronotum less densely punctate, the elytra purple and the underside obscure green. Type in South Australian Museum.

N.B.—*B. splendens* Blkb. and *B. occidentalis* Blkb. The types of these two species are before me. While closely allied I consider them distinct; the former differs not only in the colour of elytra (blue-green in *splendens*, golden-green in *occidentalis*), but in their apical structure and especially in the punctures of the underside, which in *splendens* are unusually fine and sparse, in *occidentalis* strong and close.

EURYSPILUS VIRIDIS, n.sp.

Narrowly cylindric; metallic green throughout.

Head: front depressed and finely canaliculate between the eyes, these rather prominent; finely and densely punctate, antennal joints dentate from the 6th outwards. *Prothorax* cylindric, apex and base subtruncate, sides very slightly converging in a straight line from base to apex, disc finely punctate, showing a slight transverse striolation; medial impression clearly defined throughout except near apex, widened at base. *Scutellum* round, impressed at middle. *Elytra* of same width as prothorax at base, apices feebly bidentate; apical margins minutely serrate, each with the suture and four costae sharply raised, both costae and intervals finely punctate; underside coarsely punctate. *Dimensions*: 9 x 2.2 mm.

Habitat.—Western Australia: Swan River.

A single male example in the Macleay Museum closely resembles *E. chalcodes* C. & G. in form and sculpture. It may be distinguished, however, not only by colour, but by the finer sculpture of its upper surface and the less deeply incised dentation of the apices. The underside is, if anything, more coarsely punctate than in *E. chalcodes*. Type in the Macleay Museum.

Euryspilus australis Blackb.—I have, I think, identified this in several collections (including my own). If this determination is correct Blackburn was mistaken in stating the antennae to be dentate from the 5th joint. A specimen now before me from King George's Sound is clearly dentate only from the 6th



joint as in *E. chalcodes* and *E. viridis*. *E. australis* Blkb. is quite distinct from *E. chalcodes*, of which I expressed a doubt in a former paper (These Proc., 1924, p. 23).

CURIS OBSCURA, n.sp.

Elongate, sharply attenuated behind; upper surface, abdomen and antennae obscure purplish-brown, sterna and undersides of femora dark metallic green.

Head deeply impressed, finely and closely punctate. *Prothorax*: apex and base bisinuate, the former rather strongly produced at middle, anterior angles acute, posterior rectangular, sides moderately rounded at middle, disc with wide oval depression at middle near base and another near each side, a feeble medial carina throughout, surface very finely punctate, except at sides and medial depression, where punctures more obvious. *Scutellum* subcircular, impunctate. *Elytra* lightly enlarged at shoulders, subparallel to beyond half-way, thence tapering to apex, apices rather sharply and separately rounded, not quite covering abdomen, hind margins finely serrated; disc finely seriate-punctate, each with three feeble costae, the first (nearest suture) most obvious; underside closely and finely punctate, abdomen rather thickly clad—especially at sides—with long recumbent hair, the first segment showing greenish metallic gleams, apical segment with two tubercles rather than spines at extremity. *Dimensions*: 10 x 3 (+) mm.

Habitat.—South Australia (?): Monarto (?) (Tepper).

A single male specimen with an indistinct locality label is in the South Australian Museum. It is clearly distinct from other described species, not only by its absence of metallic lustre on the upper surface, but also by its combination of finely punctured surface with sharply attenuated apex, and scarcely spinose abdomen. Type in South Australian Museum.

CURIS YALGOENSIS, n.sp.

Elongate, oblong; head and pronotum olive-green or bluish, the latter with some golden gleams here and there, elytra dark blue, the base, suture and shortly at sides golden-green—becoming coppery at its junction with the darker ground-colour—the metallic colour on suture widening behind middle and terminating before the apex; the exposed pygidium, underside, legs and antennae blue, the underside brilliantly nitid.

Head widely and deeply excavated. *Prothorax*: apex nearly straight in middle, acutely produced at angles, base rather strongly bisinuate, posterior angles also acute and produced, sides well rounded, greatest width rather behind middle, rather suddenly sinuate near posterior angles; disc subalveolate-punctate, the punctures smaller and shallower near middle, larger, deeper and denser towards sides, a smooth medial line faintly indicated, a feeble shallow depression at middle near base. *Scutellum* green, circular, depressed in middle. *Elytra* rather strongly widened at shoulders, a little compressed at middle, again widening before the apical convergence, each apex separately and widely rounded (sub-truncate), the margins of apical third strongly serrated, a considerable area of pygidium exposed, this strongly punctate, each elytron with three distinct costae, outlined by rows of rather small, round punctures, the intervals between these rows irregularly punctate, the punctures on metallic sutural area small, those near sides coarse, with rugose margins. Sternal area closely and strongly, abdomen very finely, punctate, margins of segments—especially near sides—with

pale, recumbent hair; apical segment bispinose at extremity; posterior tibiae widely expanded and flattened. *Dimensions*: 15-16 x 5-5½ mm.

Habitat.—Western Australia: Yalgoo (H. W. Brown).

A fine species, the elytra superficially resembling those of the eastern species *C. aurifera* C. & G. in colour and somewhat in sculpture, the punctures being a little finer and the apices less pointed, while in *aurifera* the golden suture is of uniform width and extended to apex. The pronotum is, however, very different in its absence of coloured vittae, bright margins and lateral foveae, with closer and stronger punctures. The prosternum is less closely punctate than in *aurifera* and the expanded hind tibiae are unlike those of any other species known to me. Type in Coll. Carter.

Curis splendens Macl.—In his "Synopsis" (1877) Fairmaire described another species under the above name that is readily recognizable and distinct from Macleay's species. Dr. Obenberger has recently published (Sbornik Entom., 1923, p. 22) a special genus *Neocuroopsis* for the reception of what he supposed to be *C. splendens* Macl., but his description and tabulation clearly indicate a reference to *C. splendens* Fairm. (*nec* Macl.). I propose the name *fairmairei* for Fairmaire's species.

Of the special characters by which Obenberger distinguishes *Neocuroopsis* from *Curis*, the non-serrate hind margins of elytra seem the most important, though of doubtful generic value. (Both entire and serrate margins occur in the neighbouring genus *Castiarina*). The elytra shorter than the abdomen is more or less true of the females of all the species, while the longer first joint of the post tarsi is of specific force only. I think, therefore, that the genus *Neocuroopsis* is superfluous. Both of the above species have short elytra with their apices obliquely truncate; both have a fairly wide distribution in Queensland. The following comparison will help the student to distinguish them. Both are represented in the Macleay Museum and were known to the late Mr. G. Masters.

<i>Curis fairmairei</i> (nov. nom.)	<i>C. splendens</i> Macl.
= <i>splendens</i> Fairm. (<i>nec</i> Macl.)	
<i>Hind margins of elytra.</i> non-serrate.	serrate.
<i>Pronotum.</i> medial impression deep, sides concolorous with disc or greenish, punctures strongly defined.	medial impression moderate, sides widely coppery, punctures fine.
<i>Elytra.</i> sides concolorous with disc (rarely with apical margin metallic). punctures very coarse, costae well raised.	sides coppery or golden green. punctures fine, costae moderately raised.
<i>Underside.</i> "violaceo-cyaneo."	"golden green."

NEOCURIS AURO-IMPRESSA, n.sp.

Above peacock-blue, the sides of pronotum green, the elytra with impressions containing golden flocculence, underside nitid greenish-blue.

Head strongly, not densely punctate. *Prothorax*: apex and base bisinuate, the latter more strongly than the former, anterior angles well produced forward and acute; sides widely rounded, widest behind middle thence converging each way, posterior angles obtuse; disc finely punctate with large medio-basal fovea. *Scutellum* small, transverse. *Elytra* wider than prothorax at base, separately rounded at apex and shorter than abdomen, a considerable area of each occupied

by four gilded impressions, the first triangular at base, between the humeral swelling and the scutellum, the second round, premedial, near suture, the third elongate ovate, postmedial, also near suture, the fourth elongate near sides, exterior to the third, the surface minutely punctate, the punctures becoming coarser at sides; underside strongly punctate. *Dimensions*: 5 x 2 mm.

Habitat.—Queensland, Wide Bay.

A unique example in the Australian Museum, Sydney, bears a locality label in the handwriting of the late G. Masters. The apex of one elytron is mutilated through bad pinning. A species of unusual distinctness. Type, K 32268 in the Australian Museum.

NEOCURIS LIVIDA, n.sp.

Widely oblong, oval; above subnitid blue-black, mouth blue; beneath brilliant peacock blue-green, appendages blue.

Head with a feeble frontal impression and a short sulcus on vertex; evenly, closely and finely punctate, eyes widely separated and parallel as to their inner margins. *Prothorax* rather convex, apex lightly arcuate, base bisinuate, widest at base, thence arcuately converging to apex, anterior angles obtuse, posterior subrectangular (about 80°); rather unevenly and distinctly punctate, the punctures larger and more distant near middle and base, elsewhere smaller and closer; without medial line or foveae. *Scutellum* circular, depressed in middle. *Elytra* oblong-oval, scarcely compressed at middle, apices separately rounded, leaving a considerable portion of the dorsal body exposed; closely scalose-punctate, wrinkled near middle and sides, a foveate depression near shoulders. Underside mirror-like, very finely punctate and entirely glabrous. *Dimensions*: 7.5 x 4 mm.

Habitat.—Western Australia: Perth (Mr. Duboulay), in Melbourne Museum.

A single female example is nearest *N. monochroma* Fairm., which, however, is more brightly coloured and has the elytra "obsoletissime costulatis" and the sides of prothorax "postico leviter sinuato." Type in the National Museum, Melbourne.

NEOCURIS SAPPHIRA, n.sp.

Shortly ovate; the whole surface a concolorous rich blue (in certain lights with a violet gleam), legs violaceous.

Head rather strongly concave, deeply and closely punctate, eyes with interior margins parallel, slightly more prominent in the ♂ than in the ♀. *Prothorax* very transverse, apex nearly straight, base bisinuate, sides evenly, arcuately narrowed from base to apex, all angles a little produced and acute; disc without medial line or foveae, rather evenly covered with moderately large and shallow punctures. *Scutellum* very small. *Elytra* of same width as prothorax at base, scarcely compressed at middle, apices separately rounded, nearly covering abdomen; pro- and metasternum strongly and densely, abdomen finely punctate and glabrous. *Dimensions*: $4\frac{3}{4}$ - $5\frac{1}{2}$ x 2 - $2\frac{1}{2}$ mm.

Habitat.—Western Australia: Geraldton (A. M. Lea), in Melbourne Museum.

Two examples are, I consider, sexes of the same species, the male being the smaller, with Mr. Lea's label, the other example is merely labelled W.A. The nearest described species is *viridi-micans* Fairm., which, besides colour difference, is a more elongate species, the head and prothorax narrower. Type in National Museum, Melbourne.

Notes on Stigmodera described by Dr. Obenberger.

In Archiv. f. Naturg., 1922, p. 111-123, Dr. Obenberger has described twenty-one new species of *Stigmodera*, together with twelve named varieties or subspecies. As with *Bubastes* the author presumably distinguishes between "subspecies" and "variety," a distinction as difficult to maintain as it is undesirable in this connection. In so protean a genus as *Stigmodera* the naming of varieties could be carried out *ad nauseam*, but should only be done in those rare cases where there is a possibility of specific distinction or a clear local race is indicated.

Of his varieties I note the following:—

- S. (Themognatha) suturalis* var. *tincticollis* Obenb. = ? *S. lessoni* C. & G.
S. (Castiarina) leai var. *fasciosa* Obenb. = *S. dimidiata* Cart. (*vide* These Proc., 1919, pp. 138, 139).
S. sexguttata var. *humoriguttata* Obenb. = *S. puella* Saund.
S. wilsoni subsp. *septentrionis* Obenb. = ? *S. flavopurpurea* Cart.
S. brutella subsp. *victrix* Obenb. = ? *S. uniformis* Kerr.

Most of the other varieties are well known pattern divergences from the normal—e.g. The wide variations of *S. caroli* Blkb. (= *capucina* Blkb.) were recorded in the original description. Of the 21 new species I regard ten as certain and five others as probable synonyms as follows:—

1. *S. (Themognatha) queenslandica* Obenb. = *S. parryi* Hope.
2. *S. (Themognatha) desperata* Obenb. = *S. excisicollis* Mael.
3. *S. (Themognatha) nickerli* Obenb. = *S. (Castiarina) maculiventris* Mael.
4. *S. (Themognatha) strandi* Obenb. = *S. (Castiarina) maculiventris* Mael.
5. *S. (Castiarina) bizonata* Obenb. = *S. (Castiarina) secularis* Thoms.
6. *S. (Castiarina) saundersiana* Obenb. = *S. (Castiarina) campestris* Blkb.
7. *S. (Castiarina) circumflexa* Obenb. = *S. (Castiarina) flavosignata* Mael.
8. *S. (Castiarina) opacula* Obenb. = *S. (Castiarina) carinata* Mael.
9. *S. (Castiarina) modesta* Obenb. = *S. (Castiarina) venusta* Cart.
10. *S. (Castiarina) carteri* Obenb. = *S. (Castiarina) sexguttata* Mael. var.
11. *S. (Castiarina) bifasciatella* Obenb. = ? *S. (Castiarina) marginicollis* Saund.
12. *S. (Castiarina) obliquefasciata* Obenb. = ? *S. (Castiarina) cupreo-flava* Saund.
13. *S. (Castiarina) crucioides* Obenb. = ? *S. (Castiarina) cyanicollis* Boisd.
14. *S. (Castiarina) dicax* Obenb. = ? *S. (Castiarina) mastersi* Mael.
15. *S. (Castiarina) guttifera* Obenb. = ? *S. (Castiarina) delicatula* Kerr. var. or *tropica* Cart.

Re (1) my note (p. 88 of my Revision) states my reason for considering *parvicollis* Saund. as a synonym of *parryi* Hope, so that the author's words "in der mitte zwischen *parvicollis* und *parryi*" explains the above. (2). Nothing in the description shows distinction from Macleay's species. (3) and (4). Both named *amicta* by Kerremans (in litt.). In my Revision (p. 81) I stated that the very variably patterned *maculiventris* Mael.—the largest of the *Castiarina* subgenus—had been wrongly placed under *Themognatha* by Kerremans, a mistake apparently repeated here. (5-10). I have little doubt of these cases. (5). The habitat given is *Nordaustralien* (sic) *Perth*.

There is a specimen of *S. carinata* Mael. in my collection, labelled *opacula* Kerr., purchased with others in 1912 from a German dealer. Dr. Obenberger appears to have accepted a number of Kerremans' manuscript names without due investigation. No figures are supplied, and in twelve cases no comparison is made between the described species and any of its allies, while important charac-

ters like the presence or absence of serrated hind margins to the elytra are omitted.

By way of "amende honorable" I must confess that the two species of *Briseis* described (Ent. Soc. Lond., 1923, pp. 101-102) by me are probably synonyms as follows:—

Briseis smaragdifrons Obenb. = ? *B. cuprea* Cart.

B. prolongata Obenb. = ? *B. elongata* Cart.

The German publication, Archiv. fur. Naturgeschichte, was published in December, 1922. My paper, "Melobasis with Notes on Allied Genera," was read 15th November, 1922, but not published till August, 1923.

STIGMODERA (CASTIARINA) THERYI, n.sp. (Text-fig. 4.)

Oblong-ovate, attenuated behind; the greater part of surface above and below red; head, scutellum, medial area of pronotum, a narrow basal band and apex of elytra, and (sometimes) middle of prosternum black; antennae and tibiae greenish, femora blue-black.



*Text-fig. 4.

Head excavate and channelled between the eyes. *Prothorax*: apex and base bisinuate, the former rather prominently advanced in the middle and at the acute anterior angles, the latter with a wide medial lobe; sides well rounded, widest at middle, thence strongly converging to the front, with a feeble anterior sinuation, arcuately converging behind, the posterior angles also produced and acute, closely adapted to the elytra; disc rather coarsely punctate, the punctures more sparse at middle, dense towards sides, a smooth medial line on basal half terminated in a rather undefined fovea; the medial black area vaguely merging into the wider red parts. *Scutellum* prominent, semicircular, depressed in middle. *Elytra* lightly widened at shoulders, feebly compressed at middle, margins entire throughout, apices with a wide oval lunation between two robust exterior teeth, the apical black area small and indefinitely merging into the red; striate-punctate, the seriate punctures only seen as crenulations on the sides of the intervals, these everywhere convex and punctate, in parts transversely wrinkled. Underside finely and closely punctate and glabrous. *Dimensions*: ♂ 16 x 6 mm. ♀ 17-20 x 6.5-8 mm.

Habitat.—New South Wales: Enfield (Ramsay), Ropes Creek and Clarence River (Masters), Blue Mts. (Melbourne Museum).

Its nearest ally, *S. analis* Saund., is clearly separated by the following characters:—(1) more oblong, less attenuate, form, (2) elytral apices rounded, apical margins serrated, (3) prothorax more laterally widened, (4) all dark areas metallic, underside (except 3 apical segments partly red) brilliant dark blue.

In *S. theryi* the medial parts of the sternum are sometimes black, while the dark area of pronotum is vaguely defined, red gleams showing on the dark area. I find the species erroneously labelled *analis* Saund., in the Macleay Museum, and *jucunda* Saund., in the Australian Museum. Eight examples are before me. My example of *S. analis* Saund. is from N. Queensland, taken by Mr. Hacker. Types in Australian Museum.

*4. *Stigmodera theryi*.

PARACEPHALA VITTICEPS, n.sp.

Widely subcylindric, attenuated in front; coppery bronze, underside and lateral depressions on head and pronotum thickly silvery pubescent, elsewhere sparsely so.

Head as wide at eyes as apex of prothorax; finely punctate, medial channel deeply impressed, a wide lateral impression extending from interior of eye to the base of head, filled with pubescence. *Prothorax*: apex nearly straight (slightly produced at angles), base strongly bisinuate, posterior angles subrectangular, sides lightly rounded, widest behind middle, disc minutely shagreened (finely pustulose as seen under strong lens) with wide and irregular medial sulcus (a narrower sulcus on apical half received into a wider sulcus behind), slightly depressed and pubescent at sides. *Scutellum* triangular. *Elytra* minutely pustulose or shagreened, a feeble costa on each, extending from humeral callus to apex; underside more brightly coppery than above, densely punctate and flocculent pubescent. *Dimensions*: ♂. 8 x 3 (vix) mm. ♀. 10 x 3.6 mm.

Habitat.—Western Australia: Perth (H. M. Giles).

A pair sent me long ago by Mr. Henry Giles, may be readily distinguished from the other large species *P. thoracica* (Kerr.) by the pubescent vittate depressions on the head and differently shaped prothorax, Kerremans's species being widest near apex with an embossed ("bossué") surface. Type in Coll. Carter.

(In the ♂ the apical segment of abdomen is shortly rounded, in the ♀ that segment is more extended with a sinuate outline).

AGRILUS MACLEAYI, n.sp.

Head and legs green, pronotum coppery purple, elytra violaceous, underside golden, antennae blue; sub-glabrous and nitid.

Head impressed between eyes, punctate, with longitudinal striae on vertex. *Prothorax* widest in front, thence converging and nearly straight to base, the anterior angles lightly, the posterior strongly produced and acute; base strongly sinuate, the medial lobe subtruncate; lateral carinae widely divergent behind, the inferior carina nearly straight; disc strongly transversely striolate. *Scutellum* triangular, its base very transverse. *Elytra* deeply impressed at basal lobes, apices separately rounded and sharply serrated; surface shagreened, at the base and sides transversely strigose, apical half with short sparse light-coloured hairs. Underside finely punctate and glabrous. *Dimensions*: 4 x 1 mm.

Habitat.—Queensland: Cairns.

A minute species not very near any described species—unique in the Macleay Museum.

Agrilus.—Dr. Obenberger has lately described seven species and two subspecies of Australian Agrili (Sbornik Entom. Nat. Mus. Prague, 1923). Of these I cannot but consider four (*raphelisi*, *van diemeni*, *domini* and *danesi*) as well as the so-called subspecies (*cooki* and *tasmanicus*) as merely variations of the common and widely distributed *A. australasiae* C. & G., the complicated synonymy of which I recorded recently. The presence or absence (partial or entire through abrasion) of the sutural and lateral pubescence, together with other colour differences noted by Obenberger are not, I consider, specific distinctions, while the variations in the thoracic carinae and gular tooth are of doubtful value. This doubt as to the validity of the distinctions noted in his tabulation is intensified by the inclusion therein of *A. hypoleucus* Sd. (?), *A.*

australasiae C. & G. and *A. flavo-taeniatus* Thoms., as distinct species, with distinguishing characters not to be found in the original descriptions of these species. If Dr. Obenberger has examined the types of these species his information would be valued, otherwise his determinations are open to question. Of the remaining three species described, *A. kurandae* must be very near *A. nitidus* Kerr.; though no comparison is mentioned, *A. korenskyi* may be the species I described as *semiviridis*, but the description of *korenskyi* is lacking in many details. *A. walesicus* is probably the species I mentioned as being near *A. nigrinus* Kerr. from Banguay.

APHANISTICUS BLACKBURNI, n.sp.

Wholly black, elongate, subcylindric.

Head deeply cleft and bilobed, with a double system of punctures, the larger round and sparse, the whole surface shagreenate-punctate. *Antennae* subclavate, the last 4 segments dentate. *Prothorax*: apex slightly produced in middle, more so at the sharply acute angles, base strongly bisinuate, posterior angles rectangular, sides nearly straight (feebly widened on front half), with rather widely horizontal foliate margins, widened at base to meet the flattened basal sides of disc; surface of disc uneven, a wide medial transverse ridge separating a wide apical and a narrower prebasal depression, the whole surface (as on head) with a dense minute system of punctures overlaid with large shallow ocellate punctures sparsely and unevenly placed. *Scutellum* large, triangular, depressed. *Elytra* of same width as prothorax at base, parallel on basal half, thence rather strongly widened before the apex, the latter rather widely and separately rounded, posterior sides entire; seriate-punctate, the seriate punctures coarse and round, the intervals covered with minute punctures as on head and pronotum. Underside minutely punctate, the femora—especially the front—widely laminate. *Dimensions*: 3 x 1 (vix) mm.

Habitat.—Australia (Blackburn Coll. in South Australian Museum).

A single specimen, sent with other Buprestidae for determination, clearly differs from *A. browni* Cart. and *A. endeloides* Cart.—the only other Australian species with bilobed head. Both of these have the prothorax much more widely rounded, with very differently sculptured elytra. Type in South Australian Museum.

TENEBRIONIDAE.

ENDOTHINA, n. gen. *Opatrinorum*.

Body oval, convex, thickly clothed with scales (as in *Ulodes verrucosus* Erich.).

Head trapeziform, short and wide, widest at eyes, deeply sunk in prothorax, eyes large, transverse, prominent, coarsely faceted, antennal orbits not prominent, antennae little longer than head, 1st joint stout, cylindric, longer than succeeding, 2nd cup-shaped, 3rd longer than 4th, 3rd-7th closely adjusted, wider than long, 8th-10th strongly transverse forming a distinct club, 11th much smaller than 10th and partly received within it; palpi with apical joints subulate, mentum transverse, obscured by scales, epistoma narrow, sub-truncate without visible suture; anterior coxae globose, rather widely separated. *Prothorax* strongly transverse, widely emarginate at the anterior angles, sides and base fringed with stout whitish cilia, disc irregular; sides slightly depressed, sub-foliate. *Scutellum* transversely oval. *Elytra* closely adjusted to prothorax and

of same width at base, moderately convex; seriate punctate. *Legs* shortish, protibiae stout, much enlarged at apex, outer edge undulately subdentate, inner margin with a few spines; mid and hind tibiae serrated on outside edge, tarsi (especially claws) short. *Prosternum* rather flat, scarcely produced behind coxae, post-intercoxal process semicircular.

A very distinct genus, suggestive of *Gonocephalum* in general structure, of *Ulodes verrucosus* Er. in the scaly clothing, and of *Phaennis fasciculata* in its mottled coloration.

ENDOTHINA SQUAMOSA, n.sp.

Oblong ovate; above tawny-brown variegated with white, beneath and on legs the white scales predominating; antennae also clothed with small white scales.

Head rather flat, surface uneven and coarsely squamose, a thin, shining, interrupted carina at middle, a deep foveate depression on each side of this between the eyes, some longer scaly cilia on vertex. *Prothorax*: apex slightly produced in middle, strongly so at the widely rounded angles; widest in front of middle, wider at base than at apex, sides well rounded, slightly sinuate before the acute posterior angles, the slight dentation accentuated by a cluster of spiny cilia protruding therefrom; base strongly bisinuate, lateral flanges subfoliate, a separating depression strongly marked at base, more feebly in front; disc uneven, with four depressions, the largest triangular, extending from near middle to apex, the second, also medial, near base, and two discal, one on each side, rather behind middle; the white scales forming a rough cross on disc, besides largely shown on lateral flanges. *Scutellum* dark brown, squamose. *Elytra*: shoulders rounded, sides subparallel, apex rather bluntly rounded, the white scales generally in clusters, the more regular forming two lines of clusters, one line on each side of suture; and subfasciate clusters on apical third; the general tawny colour also relieved by some irregular, scattered dark ciliate scales, with rows of circular punctures, like sunken studs in the scaly clothing, between rows of cilia. *Legs* and *tarsi* thickly clothed with white cilia. *Dimensions*: 5-5.5 x 3 mm.

Habitat.—New South Wales: Sydney (Ocean Beach at Collaroy; Dr. E. W. Ferguson).

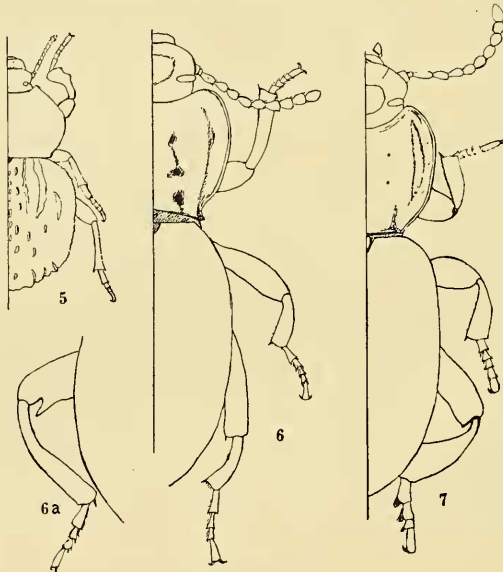
Two examples taken by Dr. Ferguson in February of the present year (1924) form another of our numerous beach-haunting Tenebrionidae, that has escaped notice till now. The rough, scaly clothing is unlike anything in the group to which it appears to belong; but the short, clavate antennae, the structure of head and prothorax, the wide, subdentate protibiae, the ciliate tarsi, widely separate it from *Ulodes verrucosus*. The apical segment of antennae smaller than the preceding is a notable character. Type in Coll. Carter.

DYSARCHUS IRREGULARIS, n.sp. (Text-fig. 5.)

Oval, convex; black, opaque, antennae and tarsi reddish.

Head densely pustulose-punctate, upper surface of eyes small and round, rather deeply sunk; antennal orbits rounded; epistoma triangularly excised in middle, rounded at sides, angulate at junction with antennal orbit; antennae robust, extending to middle of prothorax, 3rd joint equal to 4th and 5th combined, 8th-10th widely transverse, 11th small. *Prothorax* very convex, twice as wide as long, apex and base nearly straight except for the produced angles, the

anterior subacute, directed forwards, sides strongly widened and rounded at middle, converging and sinuate before the rectangular hind angles; foliate margins wide and lightly reflexed, their surface rugose-pustulose, giving a slightly crenulate appearance to the extreme border, surface of disc unevenly and closely rugose-punctate. *Scutellum* very small and deeply sunk. *Elytra* oval, convex, at shoulders rounded and wider than prothorax at its widest; margins strongly crenulate, the disc irregularly sculptured; the more obvious features on each elytron consisting of a few (two to four) short, shining undulate carinae near base; some sparse, irregularly placed pustules (like fragments of the former) on apical half; coarse transverse, pustulose ridges near the sides; the secondary or ground sculpture consisting throughout of dense punctures. Prosternum, parapleurae, epipleurae and abdomen, evenly and distinctly, not closely, punctate—the punctures of abdomen smaller than elsewhere. Legs finely pustulose,



5. *Dysarchus irregularis*. 6. *Cardiothorax foveatus*. 6a. Hind leg of same. 7. *Cardiothorax nasutus*.

front tibiae with two wide teeth at apex; hind tarsi with basal joint nearly as long as the rest combined; a thin coating of red hairs beneath. *Dimensions*: 11 x 6 mm.

Habitat.—Queensland: Stanthorpe (H. Jarvis).

A single specimen, sent by Mr. R. Illidge, is easily distinguished from *D. batesi* Haag.—the only other Eastern Australian species recorded—by the smaller size, irregular sculpture and distinctly punctate surface. It is equally differentiated from the Western species by the absence of the definite lines of pustules on the elytra, amongst other things.

CARDIOTHORAX FOVEATUS, n.sp. (Text-figs. 6, 6a.)

Oblong-ovate, black; head and prothorax (above and below) opaque, elytra and abdomen rather nitid.

Head: epistoma truncate in front, antennary orbits widely rounded, head widest in front of eyes, frontal impression deep, concave within (concavity formed by two large foveae), antennae stout, opaque black. *Prothorax* widest in front of middle, apex arcuate, front angles advanced and bluntly rounded, sides well rounded anteriorly, a little sinuate behind middle, thence rather abruptly and arcuately narrowed to hind angles—these bluntly dentate, and twisted outwards and downwards; base widely angulate in middle, extreme border narrowly raised throughout; foliate margins wide, subhorizontal, separated from disc by sulcus; disc with two deep foveae at middle of each lobe, a clearly impressed medial sulcus, triangularly widened behind to join a rather wide, basal, transverse depression. *Scutellum* arcuate-triangular, convex. *Elytra* slightly wider than and two and a half times as long as the prothorax, shoulders widely rounded; the sculpture very irregular; chiefly consisting of lines of foveae formed by strongly undulate costae, the four alternate costae (1, 3, 5, 7) more strongly raised and less undulate than the rest. Underside smooth, in the male all femora more or less armed, the hind with a large conical tooth near apex, intermediate femora with a longer, carinate tooth, the front femoral tooth just traceable, all tibiae curved and widened, the hind tibiae strongly so; their apices strongly spined. In the female all femora unarmed, tibiae straight and normally wide. *Dimensions*: 21-23 x $7\frac{1}{2}$ - $8\frac{1}{2}$ mm.

Habitat.—S. Queensland: Stanthorpe (F. A. Perkins).

Six males and eight females sent by Mr. Perkins, of the Queensland Department of Agriculture, of this very distinct species, one of the finest of the genus. The elytral sculpture is unique in the genus, and very irregular, no two examples being quite alike. It is a member of the first group in my table (Trans. Roy. Soc. S. Aust., 1914, p. 395) "Femora armed in ♂," but is very dissimilar from its nearest allies (*armipes* Bates and *opacicollis* Macl.) in sculpture. Types sent to the Queensland Museum.

CARDIOTHORAX NASUTUS, n.sp. (Text-fig. 7.)

Oblong-ovate; nitid black, antennae and tarsi brown.

Head with epistoma bluntly dentate and reflexed in middle, the stirrup-shaped frontal impression having a few punctures on it; antennae stout, 3rd joint little longer than 4th, 8th-10th widely ovate, 11th pyriform. *Prothorax*: apex arcuate-emarginate, base sub-truncate, the lobal margins straight, but not quite collinear, anterior angles rather widely rounded, sides widest in front of middle, subsinuate near the widely obtuse, non-dentate hind angles, the medial part nearly straight; extreme border thick, foliate margins separated from disc by a wide shallow sulcus; each with three setae, at wide intervals; disc with medial sulcus throughout, two small punctures near middle of each lobe and a deep basal impression like an inverted T (the transverse bar at base). *Elytra* sulcate, each with seven convex intervals and two sub-obsolete convexities at sides, the 3rd and 5th clearly wider than the 2nd and 4th. Underside and epipleurae impunctate. Middle and post-tibiae widely dilated, the latter arcuate on the superior edge; post-tarsi strongly fringed with pads of hairs forming a lateral extension on inside. *Dimensions*: 22 x 7 mm.

Habitat.—New South Wales: Port Macquarie.

The unique male example known to me has been generously given me by my friend, Mr. R. Illidge. It is one of the largest species belonging to the *acutangulus-castelnaudi* group in which the males have widely expanded tibiae

and may be distinguished by the combination of large size, nitid black colour, non-dentate hind angles of prothorax and unequal elytral intervals. The reflected clypeal tooth and post-tarsal pads are characteristic, *C. politicollis* Bates containing some approach to the former and *C. laticollis* Cart. to the latter of these characters. Type in Australian Museum. ♀ latet.

LICINOMA ILLIDGEI, n.sp. (Text-fig. 8.)

Elongate oblong, blackish bronze, glabrous; antennae, palpi and tarsi reddish-brown.

Head sparsely, minutely punctate with deep arcuate suture, and two large punctures, close together in a depression near base of forehead; antennae with 3rd segment one and a half times longer than 4th, 4th-11th increasing in size, subtriangular, 11th ovate. *Prothorax*: apex subtruncate, the narrowly rounded anterior angles feebly advanced, base truncate, sides evenly moderately arcuate, extreme border narrow, disc impunctate, medial sulcus lightly impressed, two foveae on each side of this (very faintly visible in one example), hind angles obtuse. *Scutellum* small, triangular. *Elytra* considerably wider than prothorax, humeri wide; sulcate; intervals convex and impunctate, the 3rd, 5th and 7th clearly wider than the rest; one or two setae on the 3rd interval near apex. Underside almost impunctate, the epipleurae with small, sparse punctures; hind tarsi with basal segment longer than claw segment. *Dimensions*: 12 x 4.5 mm.

Habitat.—Queensland National Park (R. Illidge).

Two specimens sent by the captor, to whom it is dedicated, show a large species readily distinguished from all described species except *angusticollis* Cart. by its impunctate elytral sulci. From *angusticollis* Cart. it is differentiated by darker colour, larger size and the unequal elytral intervals. Type in Coll. Carter.

LICINOMA MAJOR, n.sp. (Text-fig. 9.)

Elongate obovate, black, nitid, glabrous; antennae and palpi piceous, tarsi reddish.

Head almost impunctate, suture deep, a single fovea on vertex; antennae submoniliform, 3rd segment one and a half times longer than 4th, 4th-8th oval, 9th-10th subglobular, 11th largest, oval. *Prothorax*: apex lightly emarginate, wider than base, the rounded anterior angles a little advanced, base subtruncate, lightly advanced in middle; sides moderately rounded, widest in middle, posterior angles rather widely rounded, medial sulcus indicated only by a basal notch, a longitudinal depression on each side terminating behind in a fovea; disc impunctate. *Scutellum* larger than usual, semicircular. *Elytra* wider than prothorax at base, shoulders rounded but accentuated by epipleural fold, widest behind middle; sulcate, intervals lightly convex and of subequal width, impunctate, with a few setae near apical third. Epipleurae and mesosternum finely punctate, rest of underside impunctate. Hind tarsi with basal segment as long as the claw segment. *Dimensions*: 14 x 5 mm.

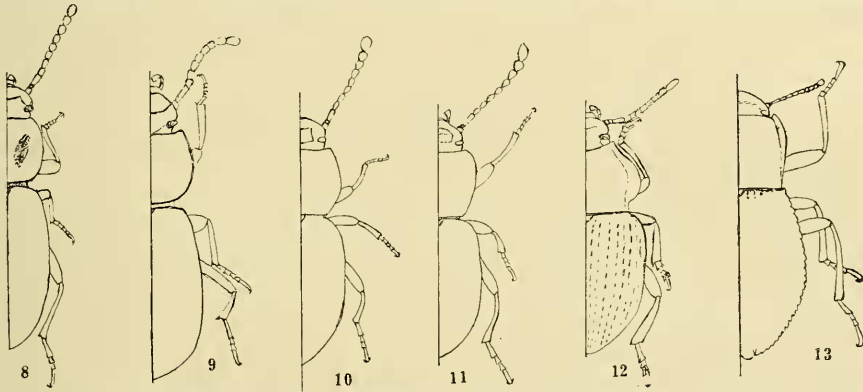
Habitat.—Queensland National Park (R. Illidge).

A single example sent by its captor shows the largest species yet described. It may be distinguished from the other sulcate species by large size, black colour, and the arcuate base of pronotum with its hind angles quite rounded off. Type in Coll. Carter.

LICINOMA SPLENDENS, n.sp. (Text-fig. 10.)

Elongate ovate; head and pronotum brilliant fiery coppery, elytra blue or violet, antennae, palpi and legs red, underside glossy black.

Head unevenly punctate, frontal impression subhexagonal with two large foveae besides punctures; antennae moniliform, 3rd joint one and a half times as long as 4th, 4th-10th oval, successively widened, 11th elongate ovate, much longer than 10th. *Prothorax* sub-scutate, convex, wider than long, greatest width in front of middle, apex nearly straight, the slightly blunted subrect-angular angles feebly advanced, apex clearly wider than base, sides arcuately converging to base, posterior angles obtuse, base truncate, lateral border narrowly horizontal with two or three setae, this border widening at front angles; disc without medial line or foveae (in some examples a vague impression near middle at base), the whole with fine shallow, rather close punctures. *Scutellum* black, small, triangular. *Elytra* slightly wider than prothorax at base and twice as long, shoulders obliquely rounded; striate-punctate, the punctures only visible as crenulations on the insides of the intervals except those in the lateral striae;



8. *Licinoma illidgei*. 9. *L. major*. 10. *L. splendens*. 11. *L. coerulea*.
12. *Adelium illidgei*. 13. *Austropeus pustulosus*.

intervals rather widely convex, of equal width, the 3rd with two or three setae, the margins also setose; underside almost entirely impunctate; front tarsi of ♂ slightly enlarged, hind tarsi with 1st joint about as long as the claw joint. *Dimensions*: 9.5-14 x 2.5-4 mm.

Habitat.—S. Queensland: Stanthorpe (F. A. Perkins).

Another fine discovery of this enthusiastic entomologist. Thirteen examples sent for examination show one of the most beautiful insects in the whole sub-family Adeliinae. Its brilliantly contrasted colours will alone distinguish it from other described species. By its structure it should come near *apasioides* (No. 21) of my table (These Proc., 1920, p. 244). Its size is very variable as in other species of which I have seen a long series. Type in Queensland Museum.

LICINOMA COERULEA, n.sp. (Text-fig. 11.)

Elongate oblong-ovate; upper surface rich dark blue, antennae, palpi and legs red, underside nitid black.

Head rather coarsely punctate, epistoma setose, the deep rhomboidal frontal impression bifoveate; antennae narrower than in *splendens*, 8-10 more strongly

widened in proportion to 4-7, the 11th pyriform, wider and longer than 10th. *Prothorax* sub-cordate, flatter than in *splendens*, apex lightly arcuate, anterior angles more prominent and sharper than in *splendens*, greatest width near front, there the rounding of the sides most marked, thence rather straightly narrowed and feebly sinuate before the defined posterior angles; these slightly wider than 90°, margins very narrowly sulcate with one or two setae; base truncate; disc minutely and densely punctate, medial channel finely and clearly impressed throughout. *Scutellum* black, triangular. *Elytra* wider than prothorax at base, shoulders more prominently raised and more squarely rounded than in *splendens*; deeply striate-punctate, the punctures in striae scarcely visible except in lateral striae; intervals equal and sharply convex (sub-carinate), without evident setae; underside almost impunctate; hind tarsi with 1st joint about as long as claw joint. *Dimensions*: 11.5 x 3.5 mm.

Habitat.—S. Queensland: Stanthorpe (F. A. Perkins).

A single specimen examined of a species little less brilliant than the preceding, also separated from its nearest allies by colour and clearly distinct from *splendens* (apart from colour) by its differently shaped prothorax with its pronounced medial sulcus, and the sharply raised elytral intervals. In my table it should be placed near *truncata* (No. 22). Type in the Queensland Museum.

ADELIUM ILLIDGEI, n.sp. (Text-fig. 12.)

Convex, widely ovate; coal-black, moderately nitid, glabrous, antennae, palpi and tarsi red.

Head coarsely rugose-punctate, antennal segment 1 stout, 2 bead-like, 3 cylindric as long as 4-5 combined, 4-10 subeonic increasing in size outwards, 11 elongate oval. *Prothorax*: apex semicircularly emarginate, anterior angles acute, pointing forwards, base truncate, sides widely diverging from apex till near base, then abruptly rounded and sinuately contracted, posterior angles acute and pointing outwards, foliate margins wide but not differing from disc in sculpture; this unevenly rugose-punctate with some smooth vermiculate impressions; medial sulcus clearly impressed on apical half, merging into an indefinite depression near base. *Scutellum* curvilinear triangular, minutely punctate. *Elytra* considerably wider than prothorax at base (widest at humeri) and two and one-third times as long, shoulders rather squarely rounded, apex widely rounded; the sculpture formed by interrupted striae, the lightly convex intervals with irregular transverse connections on same level as intervals, the 3rd and 5th intervals clearly wider than the rest; intervals not perceptibly punctate; prosternum and abdomen nearly smooth, epipleurae (especially the prosternal) with large, sparse punctures; intercoxal process widely rounded. *Dimensions*: 12 x 6 mm.

Habitat.—Queensland National Park (R. Illidge).

I name this very distinct species after the Queensland naturalist who has made such valuable observations over a wide range of fauna. The species is, in general form and elytral sculpture, nearest to *A. reticulatum* Cart. and *A. geminatum* Pasc., but is more convex than either, without a touch of bronze, and distinguished from both by the widely excised sides of pronotum in which character it is nearest *A. angulicolle* Casteln., but with a finer border and sharper posterior angles than that species. Type in Coll. Carter.

N.B.—*A. reticulatum* Cart. is readily distinguished from *A. geminatum* Pasc. by its darker colour and clearly punctate elytral intervals.

AUSTROPEUS, nov. gen. *Helopinæ*.

Body apterous. Head enclosed in prothorax to the eyes: antennal orbit horizontal, widely rounded, slightly impinging on eyes; these transversely oval, not prominent. Epistoma broadly rounded in front, scarcely separated from forehead, labrum not prominent, apical segments of palpi securiform, mentum trapeziform, wider in front than behind, antennae not reaching base of prothorax, apical segments flattened, 1st stout, 2nd bead-like, 3rd cylindrical, longer than 4th, 4th-6th obovate, 7th-10th sub-spherical, 11th oblong-oval, considerably larger than 10th. *Prothorax*: apex strongly emarginate, moderately convex, wider than long; base sub-truncate. *Scutellum* small, triangular. *Elytra* convex, obovate, striate-punctate; *prosternum* convex, its hind process triangularly sharpened and widely margined; coxae globose, hind intercoxal process rounded and margined. Legs rather long, tibiae not enlarged nor spined at apex. Tarsi rather short; post tarsi with 1st segment shorter than 4th, and as long as 2nd-3rd combined. A genus unlike any other Australian genus, with a facies somewhat resembling *Simarus* of the Cistelidae.

AUSTROPEUS PUSTULOSUS, n.sp. (Text-fig. 13.)

Ovate, convex, glabrous, opaque-brown; antennae and tarsi reddish.

Surface of head and pronotum densely and finely rugose-pustulose; the outline of the epistoma and antennal orbits almost a semicircle, eyes rather small. *Prothorax*: apex sub-truncate in middle, the anterior angles rather sharply prominent, pointing forwards, sides moderately rounded, widest about middle, scarcely sinuate behind, posterior angles sub-rectangular, clearly defined, sides and front narrowly margined, the former narrowly horizontal within the margin—at least on front half. *Elytra* slightly wider than prothorax at base; humeri prominent, subrectangular with extreme angle rounded; apical declivity steep; striate-punctate, the seriate punctures foveate and distant, with about nine convex intervals on each elytron, each with a single row of nitid pustules—the pustules near middle round, becoming more elongate and irregular towards sides (here forming irregular crenulations); the suture and third interval forming strong ridges at apex. Sternal area pustulose, episterna coarsely punctate, abdomen densely and more finely punctate, underside of legs alveolate-punctate; fore and mid tibiae slightly arched, tibiae not enlarged at apex, their apices and tarsi clothed with short golden pubescence. *Dimensions*: 12.5 x 6 mm.

Habitat.—(?) Murchison district of Western Australia.

The locality is given with doubt, the unique example being one of several Coleoptera given by Mr. C. French to Mr. F. Erasmus Wilson, in spirits without label, but probably from the Murchison River region. Mr. Wilson has generously passed it on to me. After considerable hesitation, I place it amongst the *Helopinæ*, near *Mimopeus*. Type in Coll. Carter.

CISTELIDAE.

ATOICHUS FLAVIPES, n.sp.

Oval; head, prothorax, scutellum and legs testaceous; antennae, elytra and underside black.

Head and *prothorax* more strongly punctured than in *A. bicolor* Blackb., the antennal joints wider. *Prothorax* widest at base, lightly, arcuately converging to apex, base and apex truncate. *Elytra* wider than prothorax, sub-parallel

for greater part, very finely sub-striate-punctate, about two striae near suture fine but distinct, the rest ill-defined or obsolete, under a Zeiss binocular the fine seriate punctures are seen to be closely set (both rows and punctures) and scratch-like. *Dimensions*: $4\frac{1}{2} \times 1\frac{3}{4}$ mm.

Habitat.—Bribie Island, Moreton Bay (H. Hacker and A. M. Lea).

A single example sent by Mr. Lea is clearly distinct from *A. bicolor* Blackb., not only by colour differences, but by its distinct elytral sculpture, which in *bicolor* is clearly striate-punctate throughout—the striae more distant and the punctures larger than in *flavipes*. Type in South Australian Museum.

A second example varies in having the posterior legs partly dark with knees and basal half of tibiae only yellow.

ATOICHUS DIMIDIATUS, n.sp.

Oval; head, thorax, scutellum, basal half of elytra, basal joints of antennae, four front legs and posterior knees testaceous; antennae (except basal joints), apical half of elytra, underside and posterior legs (except knees) black, tarsi piceous, upper surface clothed with short, fine hair.

Head and *prothorax* very similar to the preceding, the antennal joints more slender (less oblong), the pronotal punctures finer. *Elytra* clearly striate-punctate, the seriate punctures comparatively large and well separated, the intervals flat and apparently impunctate. *Dimensions*: $4\frac{1}{2} \times 1\frac{1}{2}$ mm.

Habitat.—Queensland, Bribie Island, Moreton Bay (H. Hacker and A. M. Lea).

A single example from Mr. Lea is distinct in colour and sculpture from the other described species. It is smaller and narrower than *A. bicolor* Blackb. The dark portion is rather less than half the elytra. Type in South Australian Museum.

N.B.—The apical joint of antennae in both the above species, as also in the others (at least in *bicolor* and *tasmanicus* now before me), is smaller (especially finer) than the tenth. All the species show marked differences in their antennae.